

an encouraging message by flag signals, and notified the life-saving crew, who succeeded in saving seven of the vessel's crew out of nine. Vessel and cargo proved a total loss. Six days later distress signals were flown by the steam schooner *Grace Dollar*, when the same observer telegraphed for a tug, which was able to save both vessel and crew. The following is quoted from the *Oregon Journal*, of Portland, Oreg., in this connection.

*Sailors plying up and down the coast have a true friend in Observer Kelliher, of the North Head weather station. During the past two weeks his "eternal vigilance" has been the means of saving a score or more of them from going down to watery graves. He was the first landsman to notice the helpless condition of the American schooner Frank W. Howe, and with admirable alacrity communicated the intelligence to the several life-saving stations, which immediately responded to the call. With the spirit of the true hero, at the risk of his own life and health, he joined in the work of rescue. Every man on board the doomed vessel was brought ashore in safety. A few days later the watchful observer discerned a small speck out upon the misty sea that did not look altogether right. With the aid of a telescope he discovered it was a steamer in distress. He apprised the tugboat captains and they went to the rescue. Later they returned with Grace Dollar in tow, and the alert Kelliher was again the direct means of saving life and property.*

On June 6, 1904, the waterlogged schooner *Antelope* was sighted by the Southeast Farallon observer in great peril. Assistance from San Francisco was telegraphed for and arrived in the nick of time to save both vessel and crew.

#### PRINTING AND PUBLICATIONS.

The total number of copies, consisting of the regular publications of the Weather Bureau, together with books, bulletins, and miscellaneous pamphlets and forms, printed and disseminated during the year amounted to 46,229,853, of which 21,919,853, an increase of 1,919,853 copies over the preceding year, were printed in the office of the Bureau, as follows:

Daily Weather maps, 569,680; Monthly Weather Reviews, 57,600; Climate and Crop Bulletins, 151,567; Snow and Ice Bulletins, 31,216; station maps, 3,093,400; and miscellaneous books, pamphlets, meteorological charts and forms, 18,016,390.

The remainder of the work, mostly station maps and forecast cards, was performed at the Government Printing Office.

There have been no additions to or improvements in the plant since last report.

#### PERSONNEL OF THE BUREAU.

##### CLASSIFIED SERVICE.

**APPOINTMENTS.**—During the fiscal year appointments were made as follows: By original certification at salaries ranging from \$360 to \$1000 per annum, 48; by transfer at salaries from \$1000 to \$1250, 4; and by reinstatement at salaries from \$360 to \$1000, 4; total, 56.

**TEMPORARY APPOINTMENTS.**—There were 14 temporary appointments for periods from ten days to three months and at salaries from \$360 to \$720; 25 emergency appointments for periods from a week to thirty days and at salaries from \$450 to \$1250—all of which were made under the authority of the Civil Service Commission. Total appointments, all kinds, during the year, 95.

**PROMOTIONS.**—One hundred and thirty-one promotions were made, all but three being by advancement to the next higher grade. The exceptions were: One employee promoted from \$1600 to the position of librarian and climatologist at \$2000 because he was the only one between those grades qualified for the position. One was promoted from assistant observer at \$1000 to observer at \$1300 on account of his demonstrated fitness to fill the vacancy caused by the death of a section director, he being on duty as assistant at the station at which the vacancy occurred, and for months during the illness of the deceased having performed the latter's duties. The third was in the case of a messenger certified by the Civil Service Commission to fill a temporary vacancy at \$450 per annum. Coincidental with the termination of the \$450 vacancy another

occurred in the \$600 grade, to which this employee was promoted and in which he served a few days only.

**REDUCTIONS.**—The exigencies of the service (change of station, assignment requested by employees, or necessitated by the public needs) required eight reductions. In addition, three were made because of carelessness in the performance of important meteorological work, four because of physical disability, one because of frequent absences without authority and delaying payment of debts, two because of excessive use of intoxicants and neglect of duty, and one because of insubordination, making a total of nineteen for all causes.

**RESIGNATIONS.**—There were 44 voluntary separations from the Bureau, of which number nine were permitted for the purpose of enabling employees to accept appointments in other branches of the public service. Seven resignations were required as follows: Three for inefficiency, one for excessive use of drugs, one for inefficiency and marked personal uncleanness, one for nonpayment of debts, and one for delaying payment of debts and tardiness in reporting for duty. Total separations, 51.

**REMOVALS.**—Discharges were ordered in nine cases, for the following causes: Unsatisfactory service, four; intoxication and neglect of duty, one; insubordination and unsatisfactory service, two; intoxication and insubordination, one; untruthful statement as to cause of absence and neglect of duty, one.

**DEATHS.**—The total number of deaths was five. During the preceding year but two were recorded.

##### UNCLASSIFIED SERVICE.

Appointments to the unclassified service numbered nine (the salaries ranging from \$1.50 per diem to \$600 per annum), as follows: For duty at Washington, D. C., four (one through the Board of Labor Employment and three for temporary period of less than one month), for duty outside the District of Columbia, five (of which number four were appointed as temporary laborers at \$1.50 per diem and employed in road building in connection with the new station at Mount Weather, Va.).

Nine unclassified employees were promoted during the year, each promotion being made to the next higher grade, the salaries ranging from \$480 to \$720 per annum.

One unclassified employee was reduced, on account of change of station, at his own request. Eight voluntary resignations were accepted and one, a station agent, was necessitated by a change of the status of the station at which the agent was serving. But two unclassified employees were removed; one under strong suspicion of theft, and the other for obtaining leave of absence under false representation when his services were needed, and for absence without authority. No deaths occurred in the unclassified service.

##### ABSENCES DURING THE CALENDAR YEAR, 1903.

**STATION.**—The average absence of station employees, with pay, during the calendar year 1903, was 1.1 days on account of sickness and 10.5 days on account of annual leave. Ninety-nine per cent of the station employees being males, the matter of sex has been disregarded in figuring the average.

**WASHINGTON, D. C.**—The average absence, with pay, of employees at Washington, D. C. (clerks, mechanics, messengers, and laborers), during the same period was, males, 4.7 days on account of sickness and 27.1 days on account of annual leave; females, 6.7 days on account of sickness and 28.8 days on account of annual leave.

The general average of the entire service, station and Washington combined, was 2.1 days on account of sickness and 14.9 days on account of annual leave.

##### STATISTICS OF THE SERVICE.

The following tables show in compact form the numerical strength of the Bureau and the highest and lowest salaries paid in the classified and unclassified grades:

*Numerical strength of the Weather Bureau, July 1, 1904.*

<b>At Washington, D. C.:</b>		
Classified .....	169	
Unclassified .....	14	183
<b>Outside of Washington, D. C.:</b>		
Classified .....	476	
Unclassified .....	11	487
<b>Total commissioned employees .....</b>	<b>670</b>	
<b>Additional employees outside of Washington, D. C.:</b>		
River observers .....	230	
Storm-warning displaymen .....	236	
Cotton-region observers .....	141	
Corn and wheat region observers .....	135	
Rainfall observers .....	71	
Fruit and wheat region observers .....	19	
Sugar and rice region observers .....	9	
<b>Total noncommissioned employees .....</b>	<b>841</b>	
<b>Total paid employees .....</b>	<b>*1,511</b>	
Voluntary observers .....	3,367	
Voluntary crop correspondents .....	13,406	
<b>Total numerical strength .....</b>	<b>18,284</b>	

*Distribution of commissioned force.*

In Washington, D. C.:			
Accounts Division.....	13	Library.....	3
Barometry and research work .....	3	Meteorological Records Division .....	15
Climate and Crop Division .....	7	Miscellaneous mechanical work .....	4
Editor, Monthly Weather Review .....	2	Publications Division.....	45
Executive work.....	19	Supplies Division.....	9
Forecast Division.....	16	Telegraph Division.....	11
Instrument Division.....	10	Under captain of the watch...	26
Outside of Washington, D. C.:			
66 stations with 1 employee =	66 employees.		
47 stations with 2 employees =	94 employees.		
31 stations with 3 employees =	93 employees.		
17 stations with 5 employees =	85 employees.		
14 stations with 4 employees =	56 employees.		
4 stations with 6 employees =	24 employees.		
4 stations with 7 employees =	28 employees.		
4 stations with 8 employees =	32 employees.		
1 station with 9 employees =	9 employees.		

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487

*Salaries paid in the classified and unclassified grades.*

Grades.	July 1, 1904.	
	Station.	Washington, D. C.
<b>CLASSIFIED GRADES.</b>		
Highest salary .....	\$3,000	\$5,000
Lowest salary .....	360	450
Average salary .....	1,007	1,216
<b>UNCLASSIFIED GRADES.</b>		
Highest salary .....	720	720
Lowest salary .....	300	240
Average salary .....	541	534

Average salary for all (station and Washington, including the Chief of Bureau), \$1,029.

The foregoing table of salaries does not include employees on duty at substations (storm-warning displaymen, river observers, etc.), whose compensation ranges from \$5 to \$20 per month, and whose tour of service would average less than one hour a day.

**METEOROLOGICAL RECORDS.**

The routine work of recording the date of receipt of each meteorological form, examining and correcting same, tabulating the data contained therein for publication in the MONTHLY WEATHER REVIEW, and Annual Report of the Chief of Weather

\*This total embraces all paid employees in the Bureau on July 1, 1904, including the Chief of Bureau, but excluding employees on furlough for three months or more.

Bureau; preparing error letters for the several forms; charting data from regular and selected voluntary stations for the several charts in WEATHER REVIEW, and from which to prepare text; compiling data in compliance with requests from different Federal Departments and bureaus, including different divisions of the Weather Bureau; for State, county, and city officials; civil engineers, lawyers, physicians, health and pleasure seekers, numerous commercial concerns and purposes, and for certification under the seal of the Department has continued throughout the year.

**INFORMATION SUPPLIED THE PUBLIC.**

During the year 887 requests for data were answered, occupying in their preparation from a few minutes to days—sometimes as many as five to twelve. Besides this there were 90 calls for certified data, requiring 257 sheets, this not including a request from the sanitary district of Chicago, which required about one thousand hours to compile and verify the data, the work being performed by persons not connected with the Weather Bureau, and paid for by the sanitary commission.

Owing to the limited clerical force and the demands upon the time of clerks for more important duties, it was found necessary to adopt a new policy in connection with requests for certified data, viz: when there was a Weather Bureau office in the city in which applicant resided and the data were desired for that place the request was complied with, and in the letter of transmittal it was suggested to the applicant that he arrange to have future needs for such data filled by process of subpoena duces tecum served upon the official in charge of the station.

For requests for data which did not require certification from persons residing in a place where there is a Weather Bureau station, the applicants were referred to the local office and informed that they would be granted access to the records and allowed to extract the desired data. During the last few months applicants for information contained in climate and crop publications were referred to the local section directors.

**IMPROVEMENTS IN SERVICE.**

A scale for determining, without computation, wind velocities from the triple register sheets, devised and used by Mr. Arthur Thompson for several years past, was adopted as the standard gage for station use and the necessary drawings made from which to have plates engraved for the purpose of printing the scales and issuing them to all stations.

All instructions for the preparation of meteorological forms, which heretofore have appeared on the backs and covers of the several forms, and in various other places, were revised and assembled in one publication under the caption, "Instructions for preparing meteorological forms, division of meteorological records circular, 1904." In this circular have been brought together all instructions for preparing meteorological forms, which will do away with the printing of instructions on the several forms, be a great convenience to observers, and render unnecessary the destruction of editions of forms which have become obsolete because of amendments to instructions relative thereto and the issue of new editions of the forms, thereby saving the expense of printing new editions. The circular will be issued each year, amended to date as far as practicable.

Under the supervision of the official in charge of the division, Mr. Eric Miller codified and practically rewrote the Instructions to Observers, in future to be known as "Station Regulations."

Negotiations are under way to obtain a large number of charts of the very best procurable types of clouds, with a view of having them mounted in a neat and attractive manner for issue to stations and for sale to teachers of meteorology and physical geography and others. It is believed they will meet a popular want and their sale be large.